

### **CLAIMS**

1. A method for manufacturing an electrical cable system having an electrical cable containing a conductor core and for installing said electrical cable system over a longitudinally expandable-contractible element, said method comprising the steps of:

disposing a secondary element over said electrical cable so as to give said electrical cable substantially attached undulations thereby forming an additional length;

installing by clamping at least at two points said electrical cable system to said longitudinally expandable-contractible element; and

handling said secondary element after said clamping so as to release the attachment of said undulations thereby converting said additional length into a free to be used excess length.

2. The method according to claim 1, comprising the additional step of using a radially expandable hose in said disposing step as said secondary element and stranding said radially expandable hose and said electrical cable together in a helical-like configuration.

3. The method according to claim 2, comprising the step of using said radially expanding said hose by providing high internal pressure within said hose before said stranding process, in that the method comprises the step of maintaining said high internal pressure during the clamping process, and in that

said handling process consists of reducing said internal pressure, said hose being radially non expanded.

4. The method according to claim 2, comprising the additional step of providing a common outer sheath surrounding said hose and said electrical cable .

5. An electrical cable system having an electrical cable containing a conductor core and suitable for being installed by clamping over a longitudinally expandable-contractible element, said system comprising:

a secondary element which is disposed over said electrical cable in a way to give said electrical cable substantially attached undulations before and during said clamping, thereby forming an additional length, and said secondary element is handleable in order to release the attachment of said undulations after said clamping, thereby converting said additional length in a free to be used excess length.

6. The electrical cable system according to claim 5, wherein said secondary element is a radially expandable hose with said adjustable internal pressure.

7. The electrical cable system according to claim 6, wherein said expandable hose and said electrical cable are stranded together in a helical-like configuration in order to obtain said attached undulations.

8. The electrical cable system according to claim 5, further comprising a common outer sheath surrounding said secondary element and said electrical cable.

9. The electrical cable system according to claim 5, wherein said conductor core is a copper core and is covered with a polymer insulation sheath.

10. A heating system, having an electrical cable system according to claim 5, wherein said heating system is clamped at least at two points to a subsea pipeline.